

**Notice of Allowability**

Application No.

09/446,738

Applicant(s)

COHEN ET AL.

Examiner

Art Unit

Andrew Graham

2644

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to amendment filed 4/18/05.
2. ☒ The allowed claim(s) is/are 1, 9, 22, respectively renumbered 1, 3, 2.
3. ☒ The drawings filed on 12 July 2004 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All    b) ☐ Some\*    c) ☐ None    of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08),  
Paper No./Mail Date 4/28/05
4. ☐ Examiner's Comment Regarding Requirement for Deposit  
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_\_
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

  
Andrew Graham  
571-272-7517

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**DETAILED ACTION**

***Claim Rejections - 35 USC § 112 - 2<sup>nd</sup> paragraph***

1. The amendments made to Claims 1 and 22 overcome the previous grounds of rejection under 35 U.S.C. 112. Accordingly, said rejections are hereby withdrawn.

***Information Disclosure Statement***

2. The information disclosure statement (IDS) submitted on 4/28/2005 was filed after the mailing date of the first action on the merits, but before a final action. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement has been considered by the examiner.

***Allowable Subject Matter***

3. Claims 1, 9, and 22 are allowed.

For the purposes of allowance, these claims have been respectively renumbered, 1, 3, and 2.

4. The following is an examiner's statement of reasons for allowance:

As noted previously (see office action, mailed 1/31/2005), Claims 1, 9, and 22 are allowable over the prior art of record because the Examiner found neither prior art cited in its entirety, nor based on the prior art, any motivation to combine any of said prior art to arrive at the limitation(s) of at least providing received ultrasound signals through front and rear channels to the right and left ears of

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a user, as defined in the independent claims, when such a limitation is considered in combination with each of the other limitations, including the physical structures, recited in each of the independent claims.

The concept of processing each of left and right input signals into front and rear channels for the purpose of applying the front channels to the same respective left and right ears while applying the respective rear channels to opposite respective ears, as is generally recited in the claims, is well known in the art, as is evidenced by the prior art of record Inanaga (Figure 1), Fidi (Figure 4). However, as stated, these references provide neither teaching nor motivation for providing each of left and right signals as ultrasound signals through front and rear channels. Neumann teaches the relative processing (12) of the input signals after demodulation (10,11). Inanaga et al (USPN 5687239) also teaches the demodulation (166) of an input signal before the processing (167,15-16,50-53) of an input for the formation of left and right headphone signals (Figure 12).

Claim 9 is dependent upon Claim 22 and thus includes the limitations of the independent claim and is allowable for the same reason.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

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**Conclusion**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew Graham whose telephone number is 571-272-7517. The examiner can normally be reached on Monday-Friday, 8:30 AM to 5:00 PM (EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vivian Chin can be reached on 571-272-7848. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

AR  
ag  
June 22, 2005

  
**VIVIAN CHIN**  
**SUPERVISORY PATENT EXAMINER**  
**TECHNOLOGY CENTER 2600**